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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/608,430	06/30/2003	Wolfgang Heikamp	037141.51861US	7164

23911 7590 03/15/2006

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EXAMINER

PHAM, MINH CHAU THI

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 03/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/608,430

Applicant(s)

HEIKAMP, WOLFGANG

Examiner

Minh-Chau T. Pham

Art Unit

1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 8-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 8-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1 and 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over George et al (5,507,847), in view of Pieciak (4,156,601).

George et al disclose a filter element for filtering a gas stream comprising at least one filter mat (12) positioned in the gas stream to which particles in the gas stream can adhere and be removed from the gas stream, wherein the at least one filter mat comprises a plurality of layers of a filter material (26, 28, 34) and a membrane (30, 32) disposed between the layers. The filter element (12) further comprises a pre-separator nonwoven web (26 in Fig. 4) on an inflow side of the at least one filter mat (12), a post-separator nonwoven web (34 in Fig. 4) on an outflow side of the at least one filter mat (12), and the filter mat comprising from one or more layers of an upstream or a downstream support material (col. 2, lines 55-61, col. 5, lines 5-10). George et al further disclose the membrane is made of polypropylene (col. 5, lines 42-47) having porosity greater than 60% and filtration efficiency at 0.3 microns (col. 4, lines 21-62, col. 6, lines 8-19). Claims 1 and 8-12 differ from the disclosure of George et al in that the filter mat comprising up to 20 single layers of glass fiber paper or plastic fiber fleece or felt. Pieciak discloses a filter cartridge (3) with at least one layer of boro silicate glass filter paper (6) being wrapped around the cylindrical support (4) (see Abstract) at least once, and preferably as many times as it is necessary to provide a thickness which will achieve the desired degree of filtering, in the intended use environment (see col. 2, lines

38-46). Therefore, Pieciak does disclose the amount of layers of glass filter paper can be more than one and as many times as 20 layers or more as possible. Pieciak further discloses the filter cartridge having an additional preliminary upstream nonwoven web (7) as a prefilter (see col. 3, lines 10-17). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide as many times of layers of glass filter papers as possible with a prefilter layer on the upstream of the glass filter papers since it is well known in the art that the nature of glass paper is very fragile and can be seriously degraded by crushing without enough support.

Response to Amendment

Applicant's arguments filed on January 17, 2006 have been fully considered but they are not persuasive.

Applicant argues that none of the cited prior arts discloses "a filter mat comprising up to 20 single layers of glass fiber paper or plastic fiber fleece or felt", as newly amended. The Examiner still maintains George et al as the primary reference under the 103 rejections to show a filter element for filtering a gas stream comprising at least one filter mat (12) positioned in the gas stream to which particles in the gas stream can adhere and be removed from the gas stream, wherein the at least one filter mat comprises a plurality of layers of a filter material (26, 28, 34) and a membrane (30, 32) disposed between the layers. The filter element (12) further comprises a pre-separator nonwoven web (26 in Fig. 4) on an inflow side of the at least one filter mat (12), a post-separator nonwoven web (34 in Fig. 4) on an outflow side of the at least one filter mat (12), and the filter mat comprising from one or more layers of an upstream or a

downstream support material (col. 2, lines 55-61, col. 5, lines 5-10). George et al further disclose the membrane is made of polypropylene (col. 5, lines 42-47) having porosity greater than 60% and filtration efficiency at 0.3 microns (col. 4, lines 21-62, col. 6, lines 8-19). The Examiner newly introduces Pieciak as the secondary reference in combination with George et al under the 103 rejections to show a filter cartridge (3) with at least one layer of boro silicate glass filter paper (6) being wrapped around the cylindrical support (4) (see Abstract) at least once, and preferably as many times as it is necessary to provide a thickness which will achieve the desired degree of filtering, in the intended use environment (see col. 2, lines 38-46). Therefore, Pieciak does disclose the amount of layers of glass filter paper can be more than one and as many times as 20 layers or more as possible. Pieciak further discloses the filter cartridge having an additional preliminary upstream nonwoven web (7) as a prefilter (see col. 3, lines 10-17), as claimed. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide as many times of layers of glass filter papers as possible with a prefilter layer on the upstream of the glass filter papers since it is well known in the art that the nature of glass paper is very fragile and can be seriously degraded by crushing without enough support.

Applicant's arguments with respect to claims 1 and 8-12 have been thoroughly considered but are moot in view of the new ground(s) of rejection, as discussed above.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh-Chau T. Pham whose telephone number is (571) 272-1163. The examiner can normally be reached on Mon/Tues/Thur/Fri 7:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1724

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Minh-Chau Pham
Patent Examiner
Art Unit: 1724
March 6, 2006

DUANE SMITH
PRIMARY EXAMINER

D-S
3-13-06